

## PHOSPHOR CONVERTED LIGHT EMITTING DEVICE

### ABSTRACT OF THE DISCLOSURE

A system includes a radiation source capable of emitting first light and a fluorescent material capable of absorbing the first light and emitting second light having a different wavelength than the first light. The fluorescent material is a phosphor having the formula  $(\text{Lu}_{1-x-y-a-b}\text{Y}_x\text{Gd}_y)_3(\text{Al}_{1-z}\text{Ga}_z)_5\text{O}_{12}:\text{Ce}_a\text{Pr}_b$  wherein  $0 < x < 1$ ,  $0 < y < 1$ ,  $0 < z \leq 0.1$ ,  $0 < a \leq 0.2$  and  $0 < b \leq 0.1$ . In some embodiments, the  $(\text{Lu}_{1-x-y-a-b}\text{Y}_x\text{Gd}_y)_3(\text{Al}_{1-z}\text{Ga}_z)_5\text{O}_{12}:\text{Ce}_a\text{Pr}_b$  is combined with a second fluorescent material capable of emitting third light. The second fluorescent material may be a red-emitting phosphor, such that the combination of first, second, and third light emitted from the system appears white.